Special Issue

Recent Advances in Sensitivity-Enhancement Methods for Surface Plasmon Resonance Sensors

Message from the Guest Editors

Nowadays, surface plasmon resonance (SPR) sensors exhibit extensive utilization in various fields, including biological analysis, disease diagnosis, environmental monitoring, and food safety. SPR sensors are known for their highly sensitive, rapid, real-time, and label-free detection. However, the direct and sensitive detection of small molecules and low-concentration compounds is still difficult to realize by conventional SPR sensors because the changes in the refractive index resulting from the binding of such analytes at the sensing surface are too small. In recent years, various sensitivity-enhancement methods have been proposed for SPR sensors, such as employing metal nanoparticles/nanostructures, magnetic nanoparticles, bimetallic layers, nearly guided waves, and two-dimensional materials (such as graphene, chitosan, and transition metal dichalcogenides). This Special Issue will publish high-quality research articles and reviews addressing all aspects of sensitivity-enhancement methods for surface plasmon resonance sensors.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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